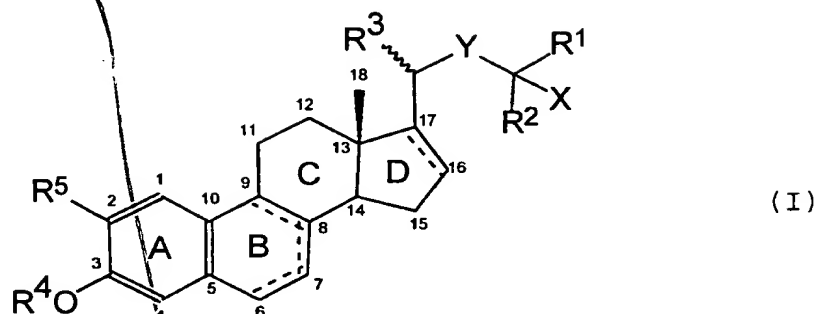


Claims:

1. Compounds of formula (I)



in which:

$R^1$  and  $R^2$ , which may be the same or different, each represents a lower alkyl, alkenyl or alkynyl group;

$R^3$  represents a methyl group having  $\alpha$ - or  $\beta$ -configuration;

$R^4$  represents a hydrogen atom or an etherifying or esterifying group;

$R^5$  represents a hydrogen atom, a hydroxyl group or a lower alkoxy group;

X represents a group  $OR^4$ , wherein  $R^4$  is as defined above, or a group  $NR^6R^7$  wherein  $R^6$  represents a hydrogen atom, an aliphatic or araliphatic organic group, or an acyl group comprising an aliphatic, araliphatic or aryl organic group linked to the nitrogen atom by way of a carbonyl group; and  $R^7$  is a hydrogen atom or a lower alkyl group;

Y represents a lower alkylene, alkenylene or alkynylene group optionally substituted by a hydroxyl, etherified hydroxyl or esterified hydroxyl group; and

the dotted lines signify that double bonds may be present at the 16(17)-position and/or either at the 6(7)- and 8(9)-positions or at the 7(8)-position.

2. Compounds of formula (I) as claimed in claim 1

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wherein  $R^1$  and  $R^2$  are independently selected from  $C_{1-6}$  alkyl groups and  $C_{2-7}$  alkenyl and alkynyl groups.

3. Compounds of formula (I) as claimed in claim 2  
5 wherein  $R^1$  and  $R^2$  are straight chain groups.

4. Compounds of formula (I) as claimed in claim 2  
wherein  $R^1$  and  $R^2$  are selected from methyl, ethyl and propargyl groups.

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5. Compounds of formula (I) as claimed in any of the preceding claims wherein  $R^4$  a hydrogen atom, a silyl group, a  $C_{1-6}$  alkyl group optionally interrupted by one or more oxygen atoms or substituted by a lower cycloalkyl group, a cyclic ether group, a  $C_{1-6}$  alkanoyl group, an aroyl group, a  $C_{1-6}$  alkane sulphonyl or halogenated methane sulphonyl group, or an arene sulphonyl group.

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6. Compounds of formula (I) as claimed in claim 5 wherein  $R^4$  is a hydrogen atom.

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7. Compounds of formula (I) as claimed in claim 5 wherein  $R^4$  is a metabolically labile group or a lower alkyl group.

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8. Compounds of formula (I) as claimed in any of the preceding claims wherein  $R^5$  represents a hydrogen atom or a methoxy group.

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9. Compounds of formula (I) as claimed in any of the preceding claims wherein X represents a hydroxyl group or a group of formula  $NR^6R^7$  wherein:

$R^6$  is a  $C_{1-6}$  alkyl group,  $C_{6-12}$  carbocyclic aryl  $C_{1-4}$  alkyl group,  $C_{1-6}$  alkanoyl group,  $C_{6-12}$  carbocyclic aryl  $C_{2-5}$  alkanoyl group,  $C_{7-13}$  carbocyclic aroyl group or any of the preceding groups substituted by one or more halo,

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C<sub>1-4</sub> alkyl, C<sub>1-4</sub> alkoxy, C<sub>1-4</sub> alkanoyl, C<sub>1-4</sub> alkylamino, di(C<sub>1-4</sub> alkyl)amino, nitro, carbamoyl or C<sub>1-4</sub> alkanoylamino substituents; and

R<sup>7</sup> is a hydrogen atom or a C<sub>1-6</sub> alkyl group.

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10. Compounds of formula (I) as claimed in claim 9 wherein X represents a hydroxyl, amino, methylamino, ethylamino, N-ethyl-N-methylamino, acetylamino, benzamido or phenylacetylamino group.

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11. Compounds of formula (I) as claimed in any of the preceding claims wherein Y contains up to 7 carbon atoms and up to 3 multiple bonds.

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12. Compounds of formula (I) as claimed in claim 11 wherein Y is a straight chain C<sub>2-6</sub> group.

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13. Compounds of formula (I) as claimed in any of the preceding claims wherein Y is substituted by a hydroxyl, etherified hydroxyl or esterified hydroxyl group positioned  $\alpha$ -,  $\beta$ - or  $\gamma$ - to the group -C(R<sup>1</sup>)(R<sup>2</sup>).X or  $\alpha$ - to any triple bond present in the group Y.

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14. Compounds as claimed in claim 11 wherein Y is selected from ethylene, trimethylene, tetramethylene, vinylene, buta-1,3-dienylene, prop-2-ynylene and 1-hydroxyprop-2-ynylene.

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15. Compounds of formula (I) as claimed in claim 1 wherein:

R<sup>1</sup> and R<sup>2</sup>, which may be the same or different, each represents a lower alkyl group;

R<sup>5</sup> represents a hydrogen atom; and

X represents a group NR<sup>6</sup>R<sup>7</sup> wherein R<sup>7</sup> is hydrogen.

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16. The compounds:

25-acetylamino-3-hydroxy-24-homo-19-nor-cholest-  
1,3,5(10),16-tetraene;

5 25-ethylamino-3-hydroxy-24-homo-19-nor-cholest-  
1,3,5(10),16-tetraene;

25-methylamino-3-hydroxy-24-homo-19-nor-cholest-  
1,3,5(10),16-tetraene;

10 25-dimethylamino-3-hydroxy-24-homo-19-nor-cholest-  
1,3,5(10),16-tetraene;

25-(N-ethyl-N-methylamino)-3-hydroxy-24-homo-19-  
nor-cholest-1,3,5(10),16-tetraene;

25-acetylamino-3-methoxy-24-homo-19-nor-cholest-  
1,3,5(10),16-tetraene;

15 25-acetylamino-3-ethoxy-24-homo-19-nor-cholest-  
1,3,5(10),16-tetraene;

25-acetylamino-3-isobutoxy-24-homo-19-nor-cholest-  
1,3,5(10),16-tetraene;

20 25-benzamido-3-hydroxy-24-homo-19-nor-cholest-  
1,3,5(10),16-tetraene;

25-phenylacetylamino-3-hydroxy-24-homo-19-nor-  
cholest-1,3,5(10),16-tetraene;

25-acetylamino-3-hydroxy-24-homo-19-nor-cholest-  
1,3,5(10)-triene;

25 3,24-dihydroxy-24-propargyl-19-26,27-trisnor-  
cholest-1,3,5(10)-triene;

2-methoxy-3,24-dihydroxy-24-propargyl-19,26,27-  
trisnor-cholest-1,3,5(10)-triene;

30 3,24-dihydroxy-20-epi-24-propargyl-19,26,27-  
trisnor-cholest-1,3,5(10)-triene;

3,24-dihydroxy-24,24-bispropargyl-19-nor-chol-  
1,3,5(10),22-tetraene;

2-methoxy-3,24-dihydroxy-24,24-bispropargyl-19-nor-  
chol-1,3,5(10),22-tetraene;

35 3,24-dihydroxy-20-epi-24,24-bispropargyl-19-nor-  
chol-1,3,5(10),22-tetraene;

3-hydroxy-25-amino-26,27-bishomo-19-nor-cholest-

- 1,3,5(10)-trien-23-yne;  
2-methoxy-3-hydroxy-25-amino-26,27-bishomo-19-nor-  
cholest-1,3,5(10)-trien-23-yne;  
3-hydroxy-20-epi-25-amino-26,27-bishomo-19-nor-  
5 cholest-1,3,5(10)-trien-23-yne;  
3-hydroxy-25-amino-26,27-bishomo-19-nor-cholest-  
1,3,5(10)-triene;  
2-methoxy-3-hydroxy-25-amino-26,27-bishomo-19-nor-  
cholesta-1,3,5(10)-triene;  
10 3-hydroxy-20-epi-25-amino-26,26-bishomo-19-nor-  
cholesta-1,3,5(10)-triene;  
3-hydroxy-25-acetylamino-26,27-bishomo-19-nor-  
cholest-1,3,5(10)-trien-23-yne;  
2-methoxy-3-hydroxy-25-acetylamino-26,27-bishomo-  
15 19-nor-cholest-1,3,5(10)-trien-23-yne;  
3-hydroxy-20-epi-25-acetylamino-26,27-bishomo-19-  
nor-cholest-1,3,5(10)-trien-23-yne;  
3,22-dihydroxy-25-amino-26,27-bishomo-19-nor-  
cholest-1,3,5(10)-trien-23-yne;  
20 2-methoxy-3,22-dihydroxy-25-amino-26,27-bishomo-19-  
nor-cholest-1,3,5(10)-trien-23-yne;  
3,22-dihydroxy-20-epi-25-amino-26,27-bishomo-19-  
nor-cholest-1,3,5(10)-trien-23-yne;  
2-methoxy-3-hydroxy-24-homo-25-acetylamino-19-nor-  
25 cholest-1,3,5(10),16-tetraene;  
2-methoxy-3-hydroxy-24-homo-25-amino-19-nor-  
cholest-1,3,5(10),16-tetraene;  
2-methoxy-3-hydroxy-25-acetylamino-19-nor-cholest-  
1,3,5(10),16-tetraene;  
30 2-methoxy-3-hydroxy-25-amino-19-nor-cholest-  
1,3,5(10),16-tetraene;  
3-hydroxy-24-homo-25-acetylamino-19-nor-cholest-  
1,3,5(10),6,8,16-hexaene;  
3-hydroxy-24-homo-25-amino-19-nor-cholest-  
35 1,3,5(10),6,8,16-hexaene;  
3,25-dihydroxy-19-nor-cholest-1,3,5(10)-  
trien-23-yne;

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3,25-dihydroxy-19-nor-cholest-1,3,5(10)-triene;  
2-methoxy-3,25-dihydroxy-19-nor-cholest-1,3,5(10)-  
trien-23-yne;

3,25-dihydroxy-20-epi-19-nor-cholest-1,3,5(10)-  
5 trien-23-yne;  
2-methoxy-3,25-dihydroxy-19-nor-cholest-1,3,5(10)-  
triene;

3,25-dihydroxy-20-epi-19-nor-cholest-1,3,5(10)-  
triene;  
10 3,25-dihydroxy-24,24a-bishomo-19-nor-cholest-  
1,3,5(10),22,24(24a)-pentaene;

25-amino-3-hydroxy-20-epi-24-homo-19-nor-cholest-  
1,3,5(10),16-tetraene;

25-acetylamino-3-hydroxy-20-epi-24-homo-19-nor-  
15 cholest-1,3,5(10),16-tetraene;

25-amino-3-hydroxy-20-epi-19-nor-cholest-  
1,3,5(10),16-tetraene;

25-acetylamino-3-hydroxy-20-epi-24-homo-19-nor-  
cholest-1,3,5(10),16-tetraene;

20 3-hydroxy-24-homo-25-acetylamino-19-nor-cholest-  
1,3,5(10),6,16-pentaene; and

3-hydroxy-24-homo-25-amino-19-nor-cholest-  
1,3,5(10),6,16-pentaene.

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17. Active compounds of formula (I) as claimed in any  
preceeding claim for use in management of neoplastic  
disease; as agents to promote wound healing; in burn  
management; in treatment of bone diseases, autoimmune  
disease, host-graft reaction, transplant rejection,  
30 inflammatory diseases, neoplasias or hyperplasias,  
myopathy, enteropathy or spondylitic heart disease; in  
suppression of parathyroid hormone; in treatment of  
dermatological diseases, hypertension, rheumatoid  
arthritis, psoriatic arthritis, secondary  
35 hyperparathyroidism, asthma, cognitive impairment or  
senile dementia; in fertility control in either human or  
animal subjects; in management of disorders involving

blood clotting; or in reduction of serum cholesterol.

18. The use of an active compound of formula (I) as claimed in any one of claims 1 to 16 for the manufacture of a medicament for use in management of neoplastic disease; as an agent to promote wound healing; in burn management; in treatment of bone diseases, autoimmune disease, host-graft reaction, transplant rejection, inflammatory diseases, neoplasias or hyperplasias, myopathy, enteropathy or spondylitic heart disease; in suppression of parathyroid hormone; in treatment of dermatological diseases, hypertension, rheumatoid arthritis, psoriatic arthritis, secondary hyperparathyroidism, asthma, cognitive impairment or senile dementia; in fertility control in either human or animal subjects; in management of disorders involving blood clotting; or in reduction of serum cholesterol.

19. Pharmaceutical compositions comprising an active compound of formula (I) as claimed in any one of claims 1 to 16 in admixture with one or more physiologically acceptable carriers or excipients.

20. A method of treatment of a human or animal subject in the management of neoplastic disease; to promote wound healing; in burn management; in treatment of bone diseases, autoimmune disease, host-graft reaction, transplant rejection, inflammatory diseases, neoplasias or hyperplasias, myopathy, enteropathy or spondylitic heart disease; in suppression of parathyroid hormone; in treatment of dermatological diseases, hypertension, rheumatoid arthritis, psoriatic arthritis, secondary hyperparathyroidism, asthma, cognitive impairment or senile dementia; in fertility control; in management of disorders involving blood clotting; or in reduction of serum cholesterol, which method comprises administering to said subject a therapeutically effective amount of an

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active compound of formula (I) as claimed in any of claims 1 to 16.

- 5 21. A process for the preparation of a compound of formula (I) as defined in claim 1 which comprises reacting a compound containing a precursor for the desired 17-position side chain in one or more stages and with one or more reactants serving to form the said desired 17-position side chain, followed if necessary and/or desired by removal of any O-protecting group.
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